Received by HCP&BD 4/9/2024

Cultivation and Operations Manual

For

APN: 214-234-007

Proposed Medical Cannabis Cultivation Facilities

Lead Agency:

Humboldt County Planning Department
3015 H Street
Eureka, CA 95501

Prepared By:
DTN Engineering

ENGINEERING, CONSULTING, & PERMITTING

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1.0 PROJECT SUMMARY

1.1. PROJECT OBJECTIVE

Onedrop Agronomics (Client). is proposing a Special Small Outdoor permit for existing medical cannabis cultivation activities in accordance with the County of Humboldt's (County) *Commercial Medical Marijuana Land Use Ordinance* (CMMLUO). The project requires a Special Permit for approximately 8,640 (SF) of outdoor cultivation (Exhibit A). The project includes the permitting of all existing a facilities appurtenant to the cultivation, including a propagation greenhouse, and a cultivation facility for the drying, of cannabis. The applicant aims to become fully compliant with State and Local cultivation regulations.

1.2. SITE DESCRIPTION

The Project is located at APN 214-234-007 in Phillipsville CA. The subject parcel is approximately 289 acres in size (per the County of Humboldt's WebGIS). The property is impacted by two Class I streams with a 150 foot Stream Management Area (SMA). The property is primarily woodland, and has some development including existing greenhouses and, one dry shed.

1.3 LAND USE

The subject property has a General Plan designation of Timberland (T) as identified by the Humboldt County General Plan and is zoned TPZ, Wwd Vacant. Land uses surrounding the parcel are comprised of residential, timber and agriculture. The surrounding parcels are zoned TPZ, Wwd Vacant.

1.4. STATE AND LOCAL COMPLIANCE

1.4.1. STATE OF CALIFORNIA COMMERCIAL CANNABIS ACTIVITY LICENSE

Client. will obtain a Commercial Cannabis Activity license from the State of California at time such a license becomes available.

1.4.2. STATE WATER RESOURCES CONTROL BOARD

Water for cultivation use will be provided by a permitted well on APN 216-234-006. The well was installed at 40.189770 North and 123°38'58"West and the well will be powered by solar energy.

1.4.3. NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD

Client is enrolled with the North Coast Regional Water Quality Control Board (NCRWQCB) for coverage under Tier 1 of Order No. 2015-0023 Waiver of Waste Discharge Requirements and General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects in the North Coast Region (WDID Number TBD).

1.4.4. HUMBOLDT COUNTY BUILDING DEPARTMENT

All necessary building permits will be obtained from the Humboldt County Building Department for all existing structures and supporting infrastructure upon approval of the Conditional Use Permit.

1.4.5. CAL FIRE

The subject property is located within a State Responsibility Area (SRA) for fire protection. Several improvements are proposed in order to meet SRA requirements, including designating a fire turn-

around and pull-out area for emergency vehicles, and management of trees and vegetation around existing structures to maintain the required 100-foot defensible space. All structures on the property meet the 30-foot SRA setback requirement from property lines.

1.4.6. CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

A Lake and Stream bed Alteration Agreement (LSAA) from the Department of Fish and Wildlife (CDFW) was not required for this parcel.

2.0 CULTIVATION AND PROCESSING

2.1 PROPAGATION AND INITIAL TRANSPLANT

Juvenile plants are propagated on site from 'mother plants' that demonstrate the desired genetics for the specific cannabis strain. Mother plants remain in the vegetative stage solely for propagation. Cuttings are sampled from the mother plants and are rooted into a growing medium, typically oasis cubes, to produce 'clones.' The clones are placed into the propagation area, and once fully rooted they are transplanted directly into one (1) gallon plastic containers (see Appendix A for propagation area location). The juvenile plants are irrigated using drip watering methods. After 2-4 weeks the clones are then transplanted and moved into either a mixed light greenhouse where they continue their 'vegetative' cycle, and then to flowering.

Juvenile plants may also be started from seed.

2.2 OUTDOOR CULTIVATION PLAN AND SCHEDULE

The outdoor cultivation will occur in beds. The green houses will produce 2 flowering cycles per year. The monthly Cultivation Schedule for the cultivation activities associated for a typical two cycle year.

2.3 IRRIGATION PLAN AND SCHEDULE

Irrigation and fertigation of plants occurs using automatic drip watering methods, allowing for daily inspection of each plant by the cultivator and tailored irrigation and nutrient application depending on the needs of each individual plant.

2.4. HARVESTING, DRYING, AND TRIMMING

The Client will dry within the existing facilities and trimming will be performed off site.

The finished product will be transported to a licensed distribution facility.

2.5. PROCESSING FACILITY

There are no proposed processing buildings for this parcel.

2. 6. EMPLOYEE PLAN

The CLIENT will be an " agricultural employer " as defined in the Alatorre-Zenovich-Dunlap-Berman Agricultural Labor Relations Act of 1975 (Part 3.5 (commencing with Section 1140) of Division 2 of the Labor Code), and complies with all applicable federal, state and local laws and regulations governing California Agricultural Employers. There will be 1-2 employees on site.

2. 6. 1. JOB DESCRIPTIONS AND EMPLOYEE SUMMARY

The Client will conduct business oversight and management of the cultivation. Responsibilities include, but are not limited to inventory and tracking, personnel management, record keeping, budget, and

liaison with State and County inspectors as needed.

2. 6. 2. STAFFING REQUIREMENTS

There will be 1-2 employees on site. The number of seasonal laborers will not vary based on the needs of the farm during the cultivation, harvest, and processing seasons. During the peak harvest and one processing season, there are an estimated total of two (2) employees on site.

2. 6. 3. EMPLOYEE T R A I N I N G AND SAFETY

On site cultivation, harvesting, and drying is performed by employees and principals trained on each aspect of the procedure including cultivation and harvesting techniques and use of pruning tools; proper application and storage of pesticides and fertilizers; cleaning; and correct hand trimming methods. All cultivation and processing staff are provided with proper hand, eye, body, and respiratory Personal Protective Equipment (PPE). Access to the onsite cultivation, drying and processing facilities are limited to authorized and trained staff.

All employees are trained on proper safety procedure including fire safety; use of rubber gloves and respirators; proper hand washing guidelines; and protocol in the event of an emergency. Contact information for the local fire department, CAL FIRE, Humboldt County Sheriff, and Poison Control as well as the Agent in Charge will be posted. Each employee is provided with a written copy of emergency procedures and contact information. The material safety data sheets (MSDS) are kept on site and accessible to employees.

2.6.4. TOILET AND HANDWASHING FACILITIES

There is one ADA compliant porta-potty on site within 400 feet of any employee.

2.6.5. ON SITE HOUSING

The Client and future seasonal employees live off site and commute daily to the cultivation site. No new residential structures are proposed as a part of this project.

2.7. SECURITY PLAN AND HOURS OF OPERATION

2.7.1. FACILITY SECURITY

Operations are intended to be conducted securely. At all times shall operations be visibly obscured, discreet, nor draw attention. The purpose of operational security is to avoid being a nuisance activity which could attract burglary, robbery, or diversion of cannabis for unlawful use.

The following are Security Measures:

A. Operations shall be secured behind gates with KNOX Box access.

B. There may be a fence at least six feet (6') in height with a locking gate utilizing a commercial grade lock around the cultivation's areas.

1. Fencing over six feet (<6') shall require a Humboldt County Building Permit.

C. Internet monitored security and fire system may be installed, if feasible, and accessible only to permitted individuals on the premises.

D. Digital video surveillance system, if feasible may be installed, with 1280×720 resolution connected

through the internet 24/7 to a licensed alarm monitoring company.

E. Passive audible trespasser alarm system may be installed.

F. Cameras may be installed throughout the property independent of any security system.

G. Locks shall be installed on the processing facility and gates. Greenhouses may also be locked.

1. Commercial-grade, non-residential door locks at all points of entry and exit.

2. It is recommended that alarmed lock systems be considered to ensure restricted access.

H. Any security personnel employed must possess a valid Guard Card and be compliant with the California Department of Consumer Affairs.

2.7.2. HOURS OF OPERATION

Activities associated with cultivation in the greenhouses (watering, transplanting, and harvesting) generally occur during daylight hours.

3.0 . ENVIRONMENT

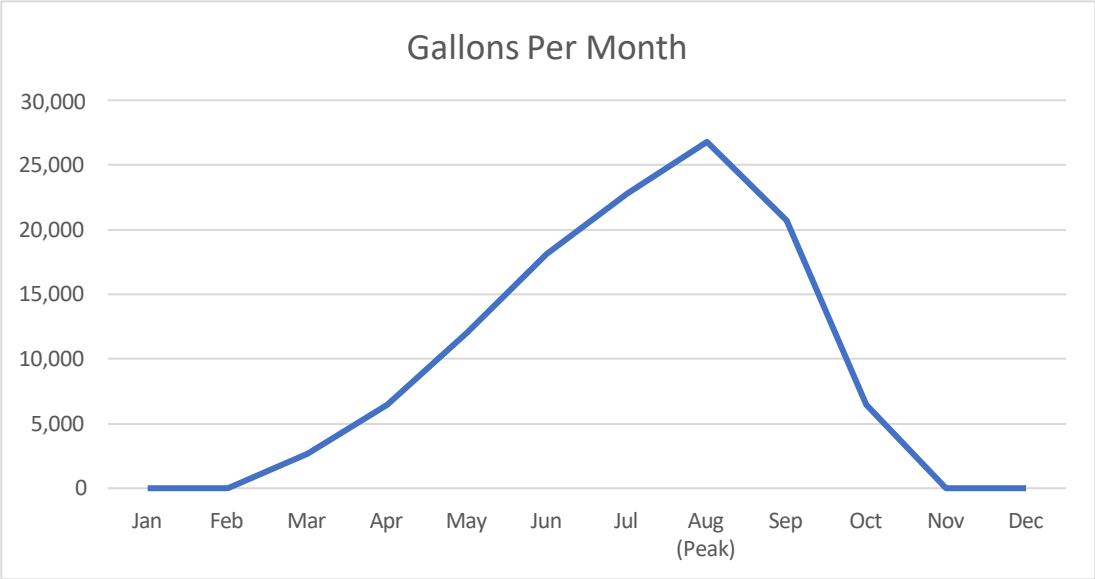
3.1. WATER SOURCE AND PROJECTED WATER USE

Water for cultivation purposes is provided by a permitted well, and no diversion of surface waters are proposed. State water rights with the State of California Water Resources Control Board will be filed when they are made available.

The table below outlines the estimated irrigation water usage for cultivation during a typical year. Variables such as weather conditions and specific cannabis strains will have a slight effect on water use.

	Size Cultivation	Peak Use @ 0.1gal/ftsq
Peak Use = 1,000gal/10,000ftsq	**8,640**	864

	Days in Operation	Estimate %Peak	GPD	**GPM**
Jan	0	0	0	**0**
Feb	0	0	0	**0**
Mar	31	0.1	86.4	**2,678**
Apr	30	0.25	216	**6,480**
May	31	0.45	389	**12,053**
Jun	30	0.7	605	**18,144**
Jul	31	0.85	734	**22,766**
Aug (Peak)	31	1	864	**26,784**
Sep	30	0.8	691	**20,736**
Oct	15	0.5	432	**6,480**
Nov	0	0	0	**0**
Dec	0	0	0	**0**
			TOTAL	**106,963**



Water storage for irrigation use is provided in the form of six 5000 gallon, two 2,500 gallons, and one 2500 gallon fire tank (Exhibit A). There is a total of 35,000 gallons of irrigation water storage.

3.3. SITE DRAINAGE, RUNOFF, AND EROSION CONTROL

CLIENT will be enrolled with the California Regional Water Quality Control Board for Tier 1 coverage, and a Site Management Plan (SMP) will be developed utilizing the Waterboard's recommendations.

3.3.1. SITE DRAINAGE AND RUNOFF

Roads shall be maintained as appropriate (with adequate surfacing and drainage features) to avoid developing surface ruts, gullies, or surface erosion that results in sediment delivery to surface waters.

Roads, driveways, trails, and other defined corridors for foot or vehicle traffic of any kind shall have adequate ditch relief drains or rolling dips and/or other measures to prevent or minimize erosion along the flow paths and at their respective outlets

Roads and other features shall be maintained so that surface runoff drains away from potentially unstable slopes or earthen fills. Where road runoff cannot be drained away from an unstable feature, an engineered structure or system shall be installed to ensure that surface flows will not cause slope failure. To prevent runoff to riparian areas, water conservation and containment measures will be implemented including the use of hand irrigation to prevent excessive water use, and the maintenance of a stable, vegetated buffer between the cultivation area and riparian zone.

3.3.2. EROSION CONTROL

The Client will utilize best management practices including but not limited to:

1. Maintenance of roads, including rocking and armoring.
2. Proper management of solid, liquid and cultivation waste (see section 3.8)
3. Cultivation facilities and spoil stockpiles will meet all required setbacks from riparian and

wetland areas.

4. Irrigation and application of fertilizers will be applied at agronomic rates.
5. Regulated products will be safely stored with secondary containment (see section 3.7)

3.4. WATERSHED AND HABITAT PROTECTION

Adherence to the proposed best management practices ensures that the watershed and surrounding habitat are protected. Site development and maintenance activities utilize BMP's in accordance with the Waterboard's recommendations. Any grading and earthwork activities will be conducted by a licensed contractor in accordance with approved grading permits.

3.5. MONITORING AND REPORTING

Monitoring will be conducted to confirm the effectiveness of corrected measures listed in the SMP and determine if the site meets all Standard Conditions. Inspections will include photographic documentation of any controllable sediment discharge sites as identified on the site map. Visual inspection will occur at those locations on the site where pollutants or wastes, if uncontained, could be transported into receiving waters, and those locations where runoff from roads or developed areas drains into or towards surface water. The inspection will also document the progress of any plan element subject to a time schedule, or in the process of being implemented.

Onsite monitoring shall occur:

- Before and after any significant alteration or upgrade to a given stream crossing, road segment, or other controllable sediment discharge site. Inspection should include
- photographic documentation, with photo records to be kept on site.
- Prior to October 15 and December 15 to evaluate site preparedness for storm events and stormwater runoff.

Following any rainfall event with an intensity of 3 inches precipitation in 24 hours.

3.6. ENERGY AND GENERATOR USE

Solar power will provide power for any fans, currently a Honda 2000 watt generators for booster pumps and sprayers, and a Honda 4000 w generator for the well pump. Everything but the well-pump generators will be returned into the respective buildings and stored when not in use. All those generators run on unleaded, so we just have fuel cans that are contained in totes. Currently the Diesel generator supplies the Drying Building with power.

By the year 2026 the Client is planning on switching the diesel generators over renewable power, which will be solar powered.

3.6.1. BEST MANAGEMENT PRACTICES

Best Management Practices (BMP's) are employed when storing, handling, mixing, application and disposal of all fertilizers, pesticides, and fungicides. All nutrients, pesticides and fungicides are in a locked storage room, and contained within watertight, locked and labeled containers in accordance with manufactures instruction. Application rates will be tracked and reported with the end of the year

monitoring report required in the SMP. Persons responsible for application are trained to handle, mix, apply or dispose of pesticides/fungicides with proper hand, eye body and respiratory protection in accordance with the manufacturer's recommendations. See the SMP for complete BMP specifications for the use and storage of regulated products.

3.6.2. FERTILIZERS

Yoke and Plow will utilize certified organic amendments and fertilizers as allowable by law. An allowed fertilizer shall be approved by the California Department of Food & Agriculture (CDFA) as containing organic input material with ingredients found on Table 1.

Table 1: Organic Soil Fertilizers and Amendments
1. Botanicare Pure Blend Pro Bloom
2. Botanicare Cal-MG
3. Botanicare Hydro-Plex
4. Botanicare Liquid Karma

3.6.3. PESTICIDES AND FUNGICIDES

The Humboldt Cure methods and care during cultivation typically require minimal pest management. Though there may be situations requiring the use of cultural and natural pest management. All natural substances used as pesticides shall be approved by the California Department of Food & Agriculture (CDFA) as containing organic input material with ingredients found on Table 2.

Table 2: Legal Pest Management Practices for Marijuana Growers in California	
Active Ingredient	Pest or Disease
Azamax	Aphids, Whiteflies, Fungus Gnats, Leafminers, Cutworms, and mites
Dr Zymes	Powdery Mildew
Zero-Tol	Root Diseases, , Powdery Mildew & Mold

3.6.4. FUELS AND OILS

Fuels and oils stored on site include:

- Gasoline - 50 Gallons
- Propane - 100 Gallons

3.7. WASTE MANAGEMENT PLAN

3.7.1. SOLID WASTE MANAGEMENT

Trash and recycling containers will be located within the premises. The trash containers will be enclosed within a fenced area to prevent animal intrusion. Solid waste and recycling will be hauled off-site via a trailer to the Redway Transfer Station, at least once per week.

3.7.2. CULTIVATION WASTE AND SOIL MANAGEMENT

Cultivation vegetative matter such as root balls, branches, and leaves are composted or burned at a designated area. Spent potting soil is used in orchard/vegetable garden. The soil containment area is lined to prevent any soil erosion or nutrient seepage. The soils will be re-amended onsite and reused, new soil will be brought onsite every couple of years and tilled into the beds. All packaging from soil amendments and fertilizers will be collected and disposed at an appropriate facility.

3.7.3. WASTEWATER MANAGEMENT

The proposed processing facility will have an ADA compliant porta-potty.

4.0 PRODUCT MANAGEMENT

4.1. PRODUCT TESTING AND LABELING

Samples are selected from individual harvested cannabis strains and are tested by a licensed third-party lab in accordance with State and local standards and will include tracking ID's provided by the County of Humboldt and/or Statewide tracking systems once they become available.

4.2. PRODUCT INVENTORY AND TRACKING

Until such time as either a County or Statewide cannabis product and inventory tracking system becomes available, an internally developed system of inventory and tracking is utilized. The Agent in Charge and Lead Cultivator ensure all medical cannabis from clone to packaged product is tracked, accounted for, and inventoried. Records are kept at each phase of the harvest and processing operation for reporting and compliance with State and Local regulations. The information recorded for each harvest includes:

- Cultivation canopy area
- Weight of flowers, by-product, and trim waste after drying and separation
- Weight of buds after trimming
- Product ID numbers and product weight
- Staff identification (at each step)
- Physical location of the plant material at all times

4.3. TRANSPORTATION AND DISTRIBUTION

Transportation will be handled by a third-party, contracted, licensed transporter/distributer in accordance with State and Local regulations. All merchantable products will be distributed through licensed medical / recreational cannabis dispensaries. Prior to moving packages from the on-site holding facility to another physical location, a transport manifest will be created by the distributer/transporter and will include:

- Product ID numbers and product weight
- Route to be travelled
- Origin and destination addresses
- Time of departure
- Time of arrival

The Site Manager is responsible for performing a physical inventory of packages being transported, ensuring that the physical inventory matches the transport manifest.

Exhibit A

PLOT PLAN - ONEDROP AGRONOMICS LLC

APN: 214-234-007-000 - HUMBOLDT COUNTY

PROPERTY LINE AND BEARING NOTES

THIS IS NOT A RECORD OF SURVEY. THE BOUNDARY SHOWN IS APPROXIMATE AND BASED OFF OF ASSESSOR'S PARCEL MAPS. NO SURVEY MONUMENTS ARE FOUND NOR SHOWN. CONTOURS SHOWN WERE IMPORTED FROM HUMBOLDT COUNTY GIS MAPPING DEPARTMENT. AERIALS ARE FROM DRONE FLIGHTS AND GOOGLE EARTH PRO.

CONTRACTOR ALERT!

CONTRACTOR MUST CONTACT USA NORTH 811 AT LEAST 72 HOURS BEFORE ANY EARTHWORK OR ACTIVITIES THAT MAY IMPACT EXISTING UNDERGROUND UTILITIES. EXISTING UTILITY ALIGNMENTS BOTH HORIZONTALLY AND VERTICALLY MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION ACTIVITIES.

CULTIVATION NOTES

- THERE ARE NO SCHOOLS, SCHOOL BUS STOPS, PLACE OF WORSHIP, PUBLIC PARKS, OR TRIBAL CULTURAL RESOURCES WITHIN 600' OF CULTIVATION AREAS.
- THERE ARE NO OFFSITE RESIDENCES WITHIN 300' OF CULTIVATION AREAS

SRA REQUIREMENTS

- PROVIDE ADEQUATE WATER STORAGE AND DELIVERY AS OUTLINED BY SRA ORDINANCE AND CALFIRE REQUIREMENTS.
- PROVIDE ADEQUATE TURN AROUND AND PULLOUTS AS OUTLINED BY SRA ORDINANCE AND CALFIRE REQUIREMENTS.

OWNER / APPLICANT INFORMATION

OWNER/APPLICANT: YOLKE & PLOW AGRICULTURAL SERVICE LLC
MAILING ADDRESS: 572 3RD STREET SUITE B EUREKA, CA 95521
EMAIL: N/A
PHONE NUMBER: N/A

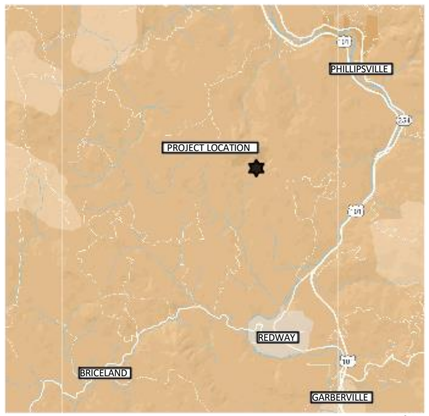
PARCEL / SITE INFORMATION

ZONING: AE;TPZ
PARCEL CENTROID: 40°10'58.4"N 123°50'04.9"W
PARCEL 7 OF ASSESSOR'S MAPS, BK 214 PG 23
CREEKS / STREAMS: YES
GRADING: N/A
WATER: ONSITE - PRIVATE (WELL)
WASTE WATER: N/A
POWER: GENERATOR
COSTAL ZONE: NO
100 YEAR FLOOD: NO

SHEET INDEX

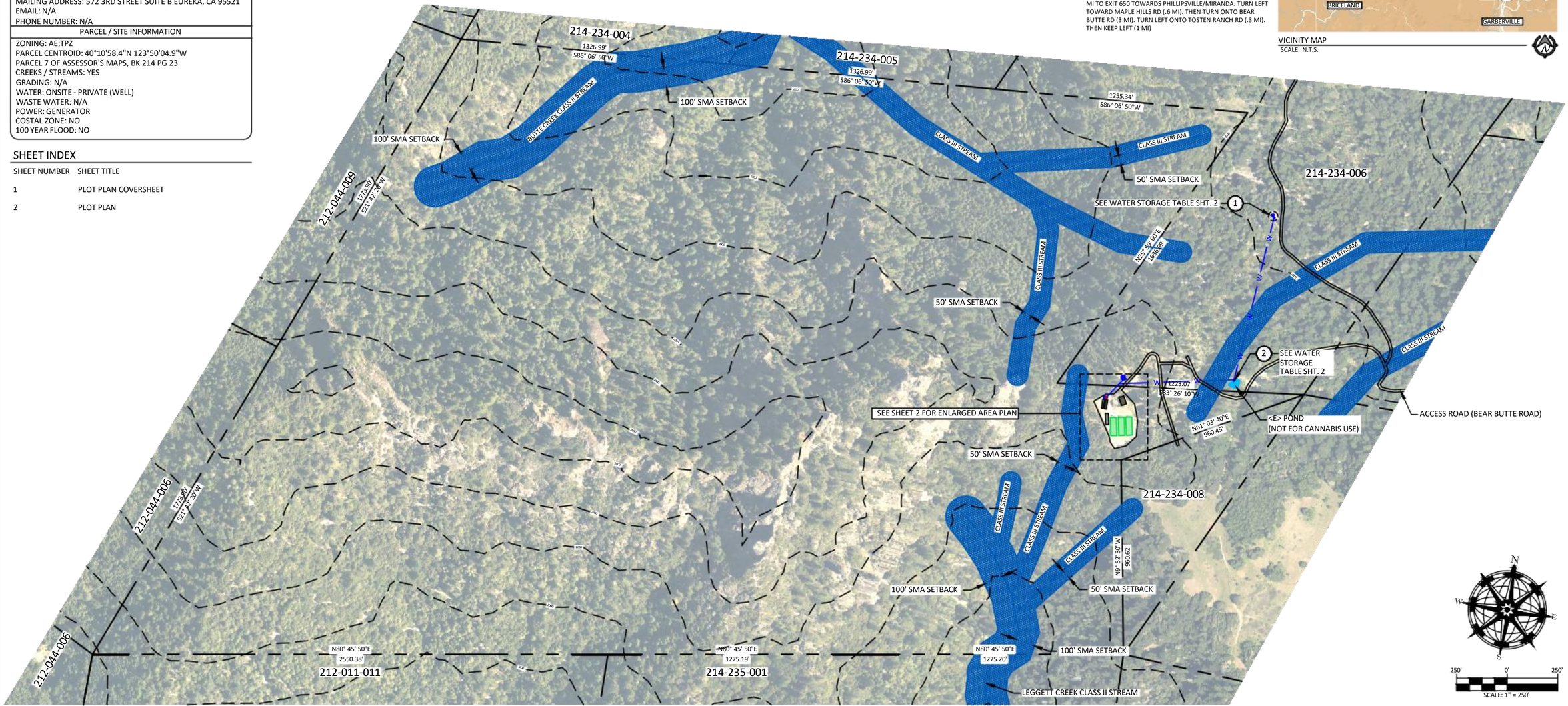
LEGEND

<P>	PROPOSED		PROPOSED
<E>	EXISTING		STREAM MANAGEMENT AREA
E	ELECTRICAL METER		EXISTING WATER STORAGE
	ELECTRIC / TELEPHONE POLE		PROPOSED WATER STORAGE
	STREAM / CREEK		EXISTING GREENHOUSE
	PROPERTY LINE		PROPOSED GREENHOUSE
	EST 200' CONTOUR		
W W	WATER SUPPLY LINE		
RWH RWH	RAIN WATER CATCHMENT SYSTEM LINES		
OHE	OVER-HEAD ELECTRIC		
OHT	OVER-HEAD TELEPHONE		
	<E> FENCE		
	<P> FENCE		



VICINITY MAP
SCALE: N.T.S.

DRIVING DIRECTIONS: FROM EUREKA TAKE US-101 SOUTH 55 MI TO EXIT 650 TOWARDS PHILLIPSVILLE/MIRANDA. TURN LEFT TOWARD MAPLE HILLS RD (.6 MI). THEN TURN ONTO BEAR BUTTE RD (3 MI). TURN LEFT ONTO TOSTEN RANCH RD (.3 MI). THEN KEEP LEFT (1 MI)



PLOT PLAN
SCALE: 1" = 250'

DTN ENGINEERING&CONSULTING
dnicoletti@dtnengineering.com

NO.	HISTORY / REVISIONS	BY	CHCK	DATE

PLOT PLAN
APN: 214-234-007-000
ONEDROP AGRONOMICS - 40°10'58.4" N 123° 50'04.9"W HUMBOLDT COUNTY

APN:	214-234-007-000
DRAWN BY:	RGN - UDD
DATE:	3/10/2022

PLOT PLAN COVERSHEET

SHEET NO.
1
OF 2

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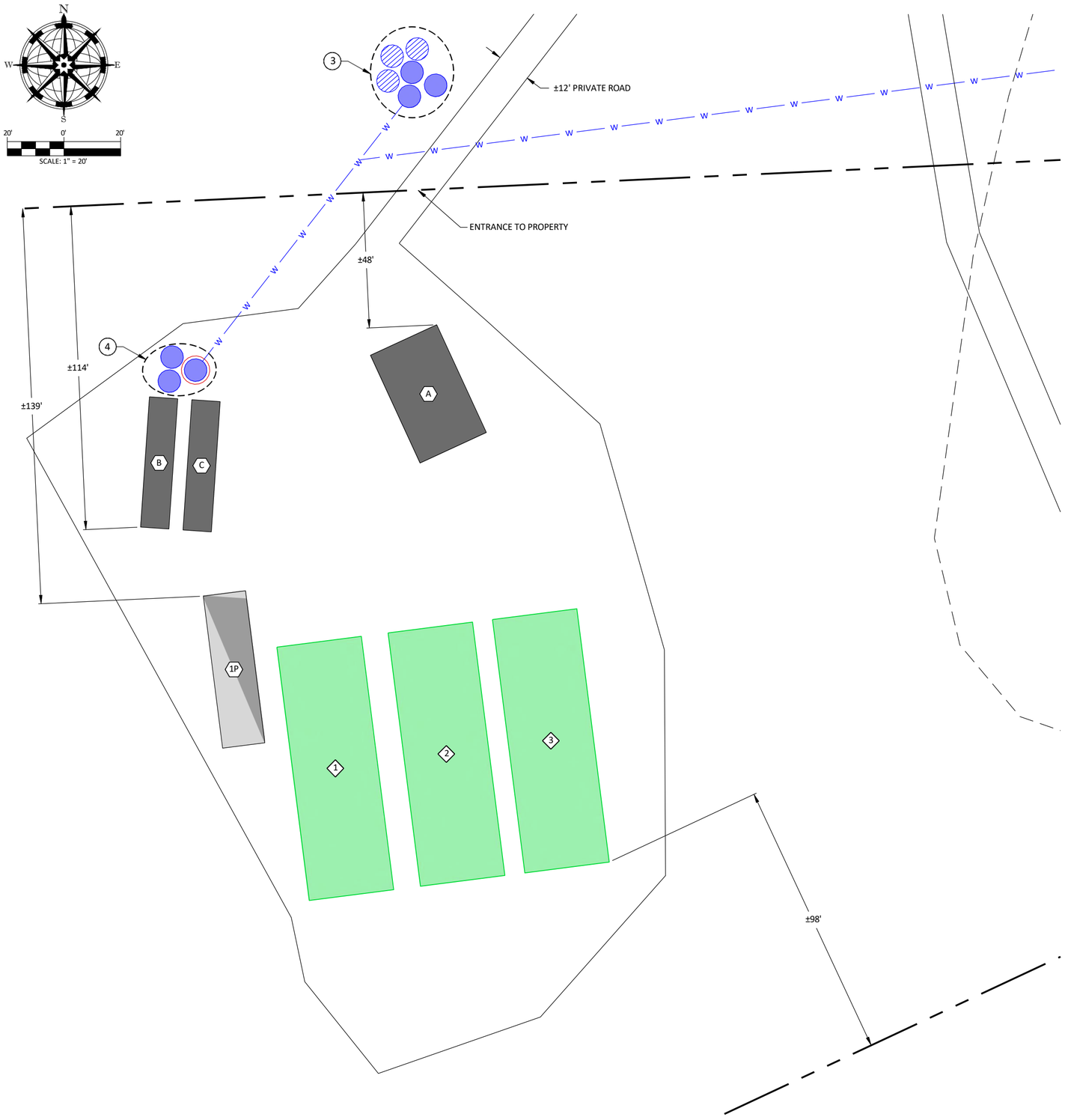
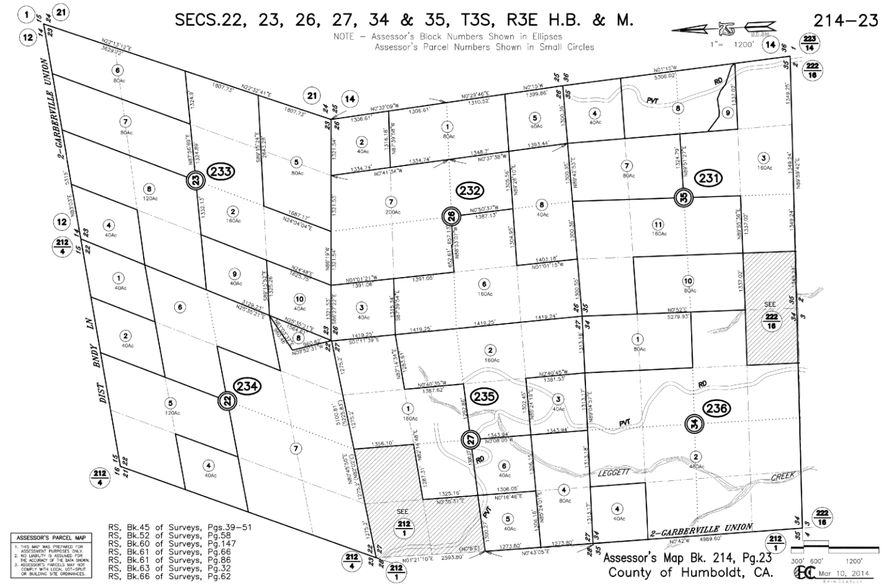


PLOT PLAN CULTIVATION AREA ENLARGED

SCALE: 1" = 20'



WATER STORAGE				
ITEM	DESCRIPTION	QTY	USAGE	TOTAL CAPACITY
1	<E> WELL WITH DEEDED ACCESS (ON APN: 214-234-006 SEE SHEET 1)	1	IRRIGATION	N/A
	<E> 2,500 GALLON HDPE WATER TANK (ON APN: 214-234-006 SEE SHEET 1)	1	IRRIGATION	1,550 GALLONS
2	<E> 2,500 GALLON HDPE WATER TANK (ON APN: 214-234-006 SEE SHEET 1)	1	IRRIGATION	2,500 GALLONS
3	<E> 5,000 GALLON HDPE WATER TANK	3	IRRIGATION	30,000 GALLONS
	<P> 5,000 GALLON HDPE WATER TANK	3	IRRIGATION	
4	<E> 2,500 GALLON HDPE WATER TANK	2	IRRIGATION	5,000 GALLONS
	<E> 2,500 GALLON HDPE WATER TANK	1	FIRE PROTECTION	2,500 GALLONS
TOTAL WATER STORAGE				41,550 GALLONS

STRUCTURE & MISC. TYPE			
ITEM	DESCRIPTION	QTY	SPECS.
A	<E> AG EXEMPT DRYING / UTILITY SHED	1	20' X 20' 400 FT²
B	<E> AG EXEMPT STORAGE	1	10' X 50' 500 FT²
C	<E> AG EXEMPT STORAGE	1	10' X 50' 500 FT²

PROPAGATION			
ITEM	DESCRIPTION	QTY	SPECS.
1P	<P> AG EXEMPT GREENHOUSE IMMATURE PLANT AREA	1	15' X 54' 810 FT²
TOTAL PROPAGATION			810 FT²

CULTIVATION AREA				
ITEM	DESCRIPTION	QTY	SPECS.	CANOPY AREA
1	<E> AG EXEMPT GREENHOUSE	1	30' X 96' 2,880 FT²	2,880 FT²
2	<E> AG EXEMPT GREENHOUSE	1	30' X 96' 2,880 FT²	2,880 FT²
3	<E> AG EXEMPT GREENHOUSE	1	30' X 96' 2,880 FT²	2,880 FT²
TOTAL CULTIVATION AREA				8,640 FT²

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SHEET NO.

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OF 2